

# *Community Growth and Heiau Construction: Possible Evidence of Political Hegemony at the Site of Kaunolū, Lānaʻi, Hawaiʻi*



BOYD DIXON, ALAN CARPENTER, FRANCIS EBLE,  
CHRISTI MITCHELL, AND MAURICE MAJOR

RECENT STUDIES on the nature of interregional interaction among prehistoric chiefly polities have focused largely on the archaeological remains of Native American complex societies (Athens 1992; Blanton and Feinman 1983; Drennan and Uribe 1987; Schortman and Urban 1987, 1992), Asian (Kohl 1992; Zimansky 1985), and European (Dyson 1985; Hedeager 1987; Renfrew and Cherry 1986; Wells 1992). But, it is often Polynesian ethnologies (e.g., Firth 1936, 1965; Sahlins 1958, 1963) that have formed the theoretical underpinning for the political models of chiefly development and organization presented by prehistorians as analogous to these other societies (e.g., Houston 1993:148). Ironically, the archaeological evidence for interaction among such polities in the Hawaiian archipelago has gone largely unrecognized until recently. In part, this may be due to the difficulty of placing both pre- and post-Contact Native Hawaiian polities into existing organizational schemes developed in other culture areas, such as the two that follow.

*Hegemonic* political systems (Hassig 1993; Luttwack 1976), for instance, consist of a core population center supported by tribute acquisition from rural peripheries through a dendritic economy administered by local elite (Santley and Alexander 1992). This model does seem to describe the relationship of the *kono-hiki* class of *aliʻi* (chiefs) with *makaʻainana* (commoners), within the pre-Contact (Handy and Handy 1972) and post-Contact (Sahlins 1992) Hawaiian economy. However, the dispersed settlement pattern found across the archipelago (Kirch 1985:35) did not contain any population centers that could be construed as “cores,” prior to the growth of Honolulu in the early nineteenth century. This is

Boyd Dixon is an archaeologist with Espey, Huston and Associates Inc., Austin, Texas.

Alan Carpenter is an archaeologist with the State Parks Division, Department of Land and Natural Resources, Honolulu, Hawaiʻi.

Francis Eble is an archaeologist with Biosystems Analysis, Inc., Kailua, Hawaiʻi.

Christi Mitchell is an archaeologist studying at the University of Southern Maine.

Maurice Major is an archaeologist in the Department of Anthropology, Bernice P. Bishop Museum, Honolulu, Hawaiʻi.

the result of the peripatetic nature of pre-Contact elite Hawaiian residency, in which highest-ranking *ali'i* exploited island resources by shifting their habitations periodically within the polity territory.

*Territorial* political systems (Eisenstadt 1963; Smith 1976), on the other hand, are also characterized by a core population and periphery, but the center is supported by tribute collected through a large provincial bureaucracy installed and maintained by a full-time resident military force (Hassig 1993). Although late pre-Contact and early post-Contact Hawaiian polities were certainly propagated at the expense of other polities through military conquest (Kamakau 1992), they were maintained through elite marital ties (Sahlins 1992) and *maka'ainana* ritual obligations to the landed *ali'i* (Kame'eleihiwa 1992). Clearly, then, these two kinds of political systems were not mutually exclusive, inasmuch as archaeological evidence from Hawai'i suggests that elements of both were present in some late pre-Contact Polynesian societies.

Although archaeologists working in Hawai'i have begun to recognize the impact of such intra- and inter-island political domination on Hawaiian history (Sahlins 1992:36), less effort has been devoted to identifying its outcome in the archaeological record. In this article, surface mapping data from two village sites located on the leeward coast of the island of Lāna'i (Fig. 1) will be presented to illustrate the possible role of elite hegemonic influence from the island of Maui over the local population of Lāna'i, as expressed through stylistic characteristics in *heiau* (religious temple) architecture. An apparent increase in community size and internal complexity, on the other hand, may be a reflection of the incorporation

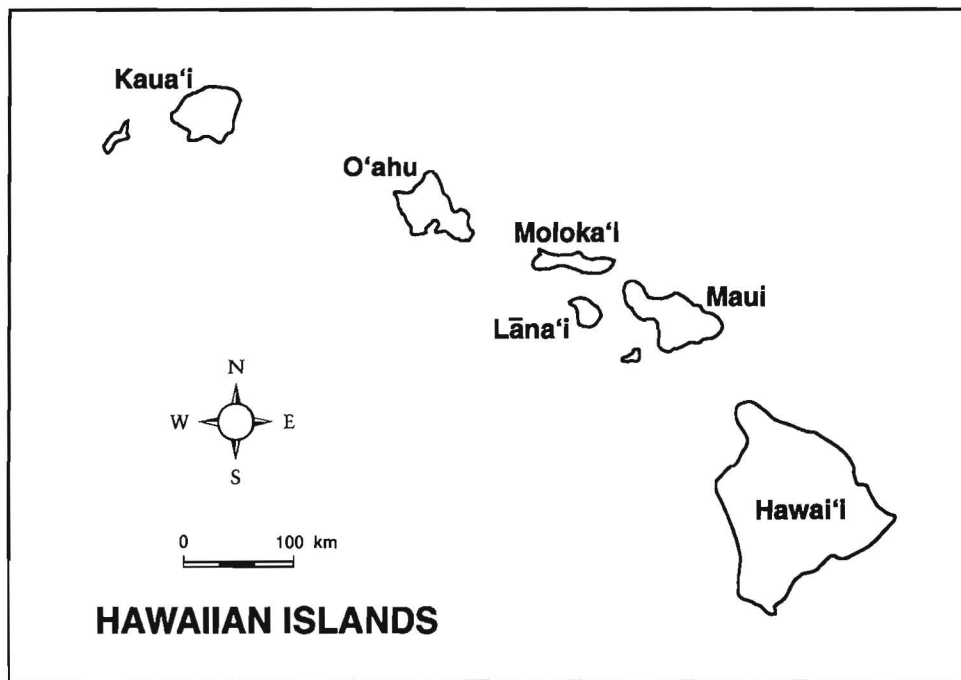


Fig. 1. The island of Lāna'i within the Hawaiian archipelago.

of Lānaʻi into a Maui territorial polity. Because the interpretation of these data from Lānaʻi is tentative, being based upon an analysis of surface remains alone, possible avenues for future research are explored as well.

#### KAUNOLŪ COMMUNITY GROWTH

The site of Kaunolū (State Site 50-40-98-25) on the island of Lānaʻi has long been recognized as one of the more enigmatic Native Hawaiian habitation sites in the archipelago (Emory 1921, 1924). This is due in part to its large size (0.25 km<sup>2</sup>) and architectural complexity in an otherwise harsh leeward environment (Fig. 2), on one of the smallest islands in the Hawaiian archipelago.

A recent study of the domestic architecture on both sides of Kaunolū Gulch (Dixon, Major, and Lazzaro 1992) revealed the existence of two spatially distinct parts to the site, characterized by stylistic differences of possible chronological significance. These settlement patterns are tentatively interpreted as evidence of the introduction of nonlocal residence customs and a new level of political organization at the site, presumably due to the hegemonic influence of Maui elite.

Archaeological investigations conducted at Kaunolū in 1991 focused on intensive survey and mapping of surface remains across two *ahupuaʻa* (the traditional Hawaiian land unit) within which the site occurs, in preparation for an interpretive park (Dixon 1991, 1992). The fundamental architectural unit was the feature (Ladefoged et al. 1987; Weisler and Kirch 1985), and these were grouped into complexes. The boundaries of complexes were determined by spatial proximity (being 10–20 m from other architecture), a similar inferred function of the features as distinct from other complexes nearby (planting vs. residential) and/or shared architectural elements bonding the features together (usually enclosure walls). Spatial aggregates of similar architectural features (such as planting circles, C-shaped enclosures, residential platforms, and paved terraces) were then grouped into eleven larger sectors at the site. Sectors were frequently separated from each other either topographically or by a distance of 20–50 m (Fig. 3; Table 1).

Both of these larger analytical units are presumed to approximate functional (agricultural, religious, and residential) and in some cases social (extended kinship units or class differences) components of the community. Without the benefit of controlled excavations, however, an assessment of chronological events at the site must rest upon a comparative analysis of architectural style, surface artifacts, and state of preservation.

#### *The West Bank*

The west bank of Kaunolū Gulch contained four site sectors easily distinguishable from each other. Sector I consisted of a series of residential complexes presumably associated with individuals involved in ritual activities performed at the nearby Halulu Heiau (Pl. I). This assumption is based on the close proximity (5–10 m apart) of the habitation complexes (2–6), a paved trail, and midden deposits to the heiau, and the distance (nearly 50 m) to the closest part of the site, Sector II. The canoe shed, fishing shrine, and paving on the floor of the gulch below the heiau and nearby residential complexes have also been included in this sector, both because of their spatial proximity to Halulu Heiau above and because of the ritual association of these structures.



Fig. 2. Site locations of Kaunolū and Māmakī on the island of Lānaʻi.



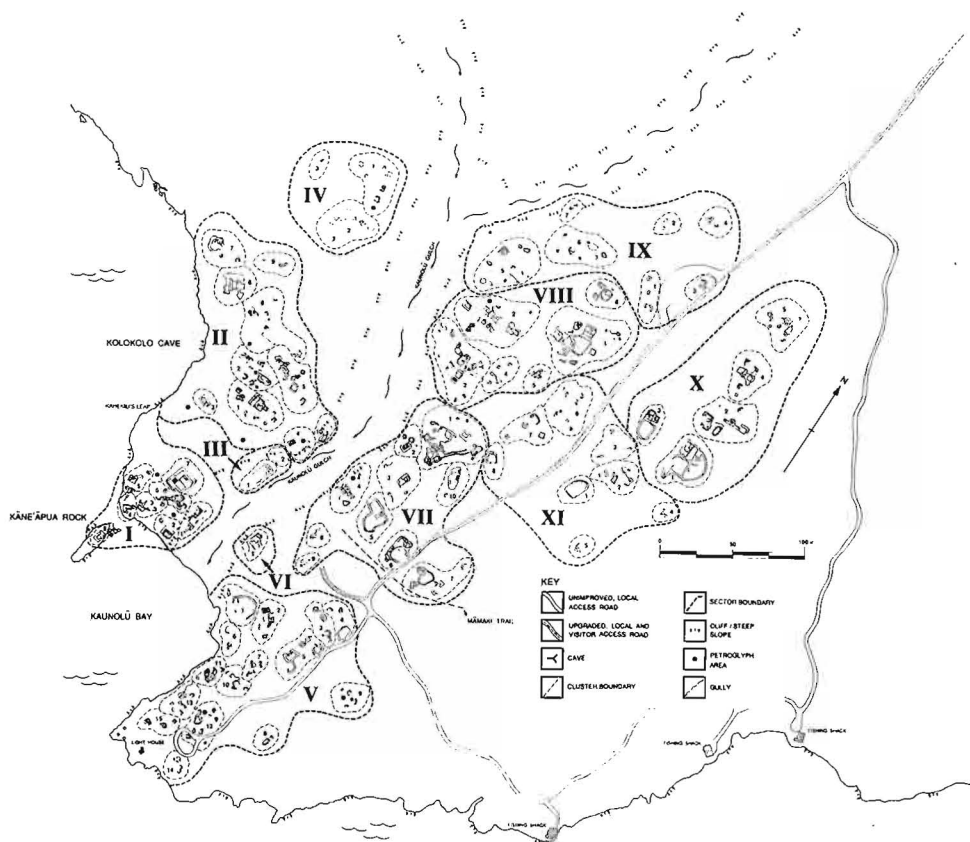


Fig. 3. The settlement of Kaunolū: site sectors denoted in Roman numerals; feature complexes denoted in Arabic numerals.

Architectural variability in Sector II is associated with a possible men's house (Fig. 4) with a small attached religious shrine, outdoor activity area, and petroglyphs (II/6); an isolated two-roomed structure with paved sleeping area and two cupboards, which may have functioned as a *hale pe'a* or menstrual house (II/3); extended family residences described above (II/1 and 7); ancillary C-shaped structures and open activity areas with associated surface midden (II/2, 5, 9); and an agricultural zone with small planting circles (II/8). When viewed in its entirety, Sector II appears to represent a social unit containing all the architectural components of a multihousehold residential complex (Ladefoged 1991:61; Sweeney 1992:42; Weisler and Kirch 1985:131).

Sector III, located along the gulch 30 m north of the fishing shrine, contains two agricultural complexes, based on the distinctive nature of the architecture found here. Rather than the presence of platforms, C-shapes, and midden, as was the case in Sector II, Complex III/1 contained the remains of two linear terraces at least 15 m long by 2 m wide, modified from the natural bank of the stream with large boulders and cobbles. The location of the abandoned Pa'ao Well was

TABLE I. SITE SECTOR DESCRIPTIONS AT KAUNOLŪ, LĀNA'Ī

SECTOR	COMPLEX	DESCRIPTION	FUNCTION	GULCH BANK
I	1	Ko'a, enclosure	Religious	West
	1	Canoe shed, paving	Fishing	West
	2-6	Platforms, cupboards	Habitation	West
	7	Heiau	Religious	West
II	1-5, 7, 9	Platforms, enclosures	Habitation	West
	6	Platform, ko'a	Religious	West
	8	Planting circles	Agriculture	West
III	1	Terraces	Agriculture	West
	2	Wall	Boundary	West
IV	1-3	Enclosures	Habitation	West
V	1, 3-9, 12, 14, 15	Enclosures, cupboards	Habitation	East
	2, 10, 11, 13	Platforms	Habitation	East
VI	1	Platform	Habitation	East
VII	1, 5-7, 10	Platforms, enclosures	Habitation	East
	2-4, 9	Platforms	Habitation	East
	8	Enclosures	Habitation	East
VIII	1, 6	Platforms, enclosures	Habitation	East
	2-3	Platforms, enclosures	Habitation	East
	4-5	Enclosures	Habitation	East
IX	1-2, 4-5	Enclosures	Habitation	East
	3, 6	Platforms, enclosures	Habitation	East
	7	Rockshelter	Habitation	East
X	1, 3	Platforms, enclosures	Habitation	East
	2, 4-5	Platforms, enclosures	Habitation	East
XI	1, 8	Enclosure	Sport (?)	East
	2-5	Enclosures	Habitation	East
	6-7	Planting circles	Agriculture	East

also presumed to be at the foot of the lowest terrace (Emory 1924:52), where fragments of a rusted metal rod can still be found underneath a large fallen *Kiawe* (*Prosopis pallida*) tree. Complex III/2 consisted of a short wall located just across a dry gulch tributary to the north, perhaps channeling runoff onto the terraces during seasonal rains and/or pedestrian traffic up the slopes otherwise.

Sector IV is located on a ridge at the northern limit of the west bank, and appears to pertain to more temporary residential and perhaps agricultural pursuits. This hypothesis is based on the presence of rectangular and C-shaped shelters with surface midden, interspersed with smaller circular stone alignments, occasional cupboards, and petroglyphs. Topographically, this sector is the most isolated of residential areas at the site, and its location may be due as much to the commanding view of the gulch junction below as to its position along the *ahu-pua'a* boundary trail, which contains other C-shaped structures on the next ridge *mauka* (inland) of the site.

The advanced state of erosion of the archaeological remains on the west bank of the gulch was noted by Emory (1924:52) in 1921, especially in comparison to the remainder of the site located on the opposite bank. Because the structures in Sector II are located on a relatively flat ridgetop rather than on the slopes that contain the better-preserved remains of Sectors VIII and X, it seems possible that



Pl. I. West bank of Kaunolū with Halulu *Heiau* in the foreground and Kaholo Pali in the background.

this portion of the settlement at Kaunolū was abandoned earlier, perhaps predating some of the construction of better-preserved architectural features on the east bank. In particular, the absence of large enclosure walls around any of the residential compounds on the west bank suggests that these structures predate the post-Contact introduction of new animals (e.g., cattle, goats, horses) in the nineteenth century.

The somewhat unusual architectural plan of the residential compounds in Sector II was also first noted by Emory (1924: 52). In particular, structure complexes II/1, 6, and 7 are composed of a rectilinear-shaped platform up to one meter in height, with two paved floor levels, facing a courtyard with midden debris that is surrounded on two sides by smaller platforms. All the features of these presumed residential units are connected by low walls that give the conjoined architectural units a U-shaped appearance. These are quite different from the individual habitation platforms surrounding the Sector I *heiau* or the small enclosures that make up Sector IV.

It is tempting to view the structure complexes of Sector II as the remnant of an indigenous residential pattern specific to Lānaʻi, perhaps predating the incorporation of the island into one of the Maui polities in the eighteenth century. The U-shaped residential complexes not found elsewhere at the site, the eroded state of Sector II architecture, the lack of enclosure walls, and the absence of any historic materials on the surface all indicate prehistoric settlement, perhaps dating to the seventeenth and eighteenth centuries.

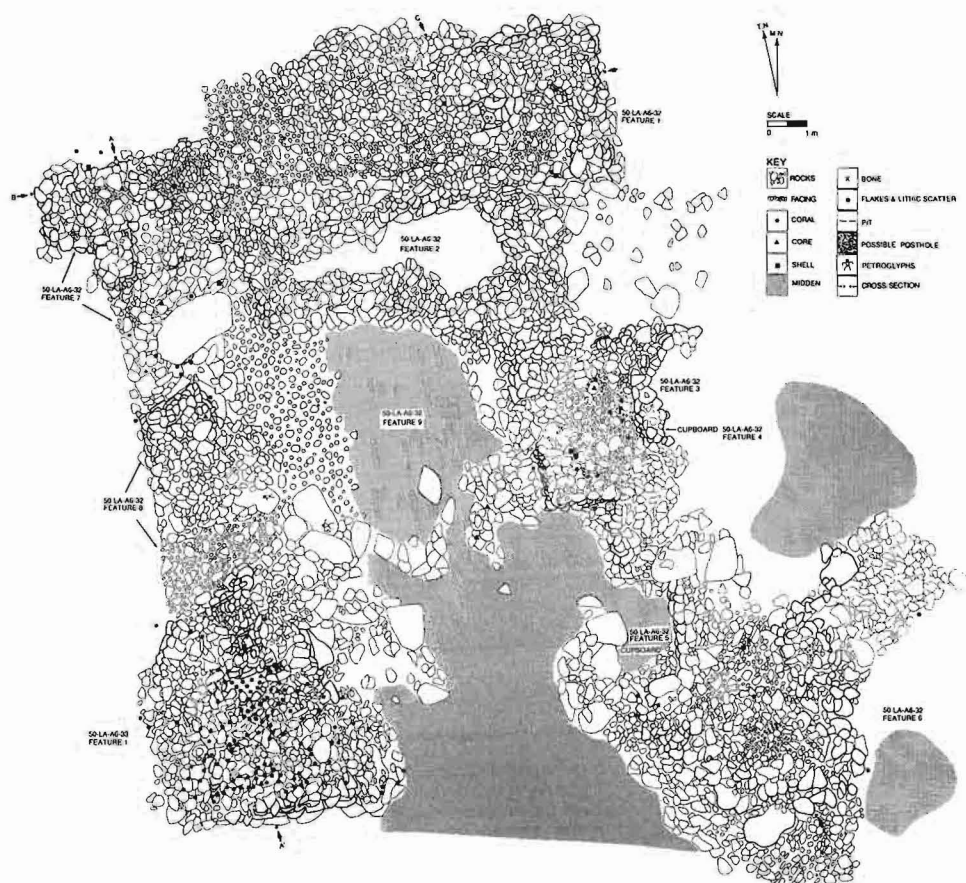


Fig. 4. U-shaped men's house/hale mua at Sector II/6.

### *The East Bank*

The architecture located on the east bank (Fig. 3) exhibits several different construction techniques and forms compared to those located in Site Sectors I, II, and IV across the gulch. Residential complexes VIII/1-2 (Fig. 5), X/1 and 3, and to a lesser degree VII/1 (Fig. 6) and 4-7 are mostly composed of individual platforms one to two meters tall surrounded by irregularly shaped enclosure walls. As these large wall systems sometimes envelop smaller C-shaped enclosures, cupboards, and/or platforms, it appears likely they were built after the Contact-period introduction of new domestic animals, to exclude them from living areas.

These complexes also represent an overall increase in labor investment compared to those on the west bank, as measured by the volume of stone used in construction and the quality of *'ili 'ili* (small water-worn rock) pavings. These two architectural elements are especially evident in the 3-m-high terrace supporting the structure associated with Kamehameha I in Sector VI (Fig. 7). Increased labor investment may indicate higher status through the control over human resources (Abrams 1987; Cheek 1986), a longer period of occupancy (Kolb 1991:13), or

both. In this respect, these complexes are different from the remaining architectural features of the east bank. Additionally, the isolation of the terrace in Sector VI in relation to other sectors at the site, and its commanding view of Halulu Heiau on the opposite side of the gulch would also seem to indicate the residence of a *mo'i* or high status *ali'i*.

A different architectural form was noted in Sectors V and IX on the east bank, similar to Sector IV on the west bank. Small enclosures and low, poorly paved platforms occurred here, sometimes surrounded by irregularly shaped enclosure walls and sometimes not. Natural bedrock outcropping is frequently adapted to a variety of uses, from stone cupboards to agricultural planting circles and *konane* board playing surfaces. These residential complexes are similar to those found elsewhere on the island (Athens and Kaschko 1988; Hammatt et al. 1990; Kaschko and Athens 1987) and indeed to residential features in leeward settings across the entire archipelago. In some cases they are inferred to represent temporary habitation; in others they may represent relatively permanent and multifunctional residences.

We hypothesize that the original village of Kaunolū was focused on the west bank and grew to encompass part of the neighboring *ahupua'a* of Keāliakapu on the east bank of the gulch after population expansion occurred by the late pre-Contact period. Variation in architectural style is evident within and between the two portions of the site, and may reflect the introduction of new levels in the organization of social groups as well as the adaptation to new architectural elements after European contact.

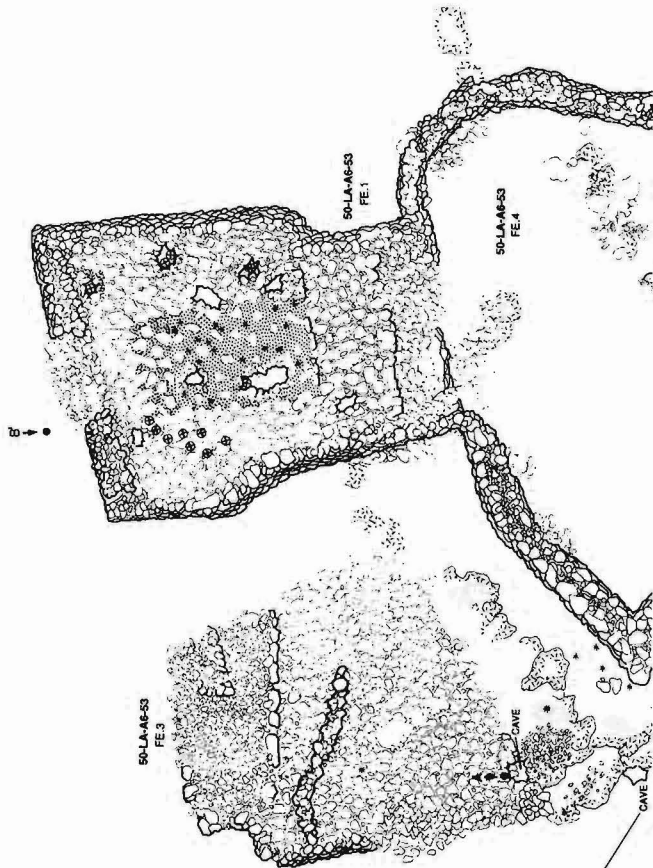
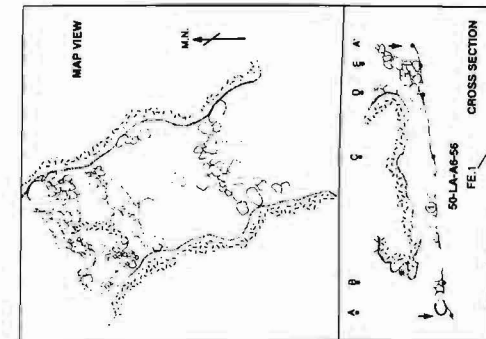
#### THE CONSTRUCTION OF HEIAU AT KAUNOLŪ AND MĀMAKI

According to early ethnohistoric accounts (Fornander Collection 1916–1918), Lāna'i did not become subject to outside political authority until Maui chief Kaka'alaneo divided the island into *ahupua'a* in the fifteenth century, based upon a chronological calibration of chiefly genealogical data (Emory 1924:21). A comparison of construction styles between dated *heiau* on leeward Maui (Kolb 1991, 1992) and those found at Kaunolū and Māmakī, however, suggests that the adoption of off-island stylistic elements did not occur until at least A.D. 1650. The settlement at Kaunolū apparently continued to serve the interests of off-island elite into the late eighteenth century, with reported visits by Maui chief Kahekili and Hawai'i island chief Kamehameha I, before and after his unification of the archipelago (Emory 1924).

As previously mentioned, the architecture found in Site Sector I at Kaunolū has been interpreted as a religious compound (Emory 1924:52) associated with the *pu'uhonua* (refuge) at Halulu Heiau. Although it is unlikely that the smaller *heiau* at the site of Māmakī had the same function, both Halulu Heiau and the smaller-sized unnamed *heiau* show evidence of at least three successive building phases described below.

#### Halulu Heiau

The first phase of construction on this *heiau* presumably consisted of the creation of a terrace 20 m wide by 25 m long (Figs. 8 and 9), behind a cobble retaining



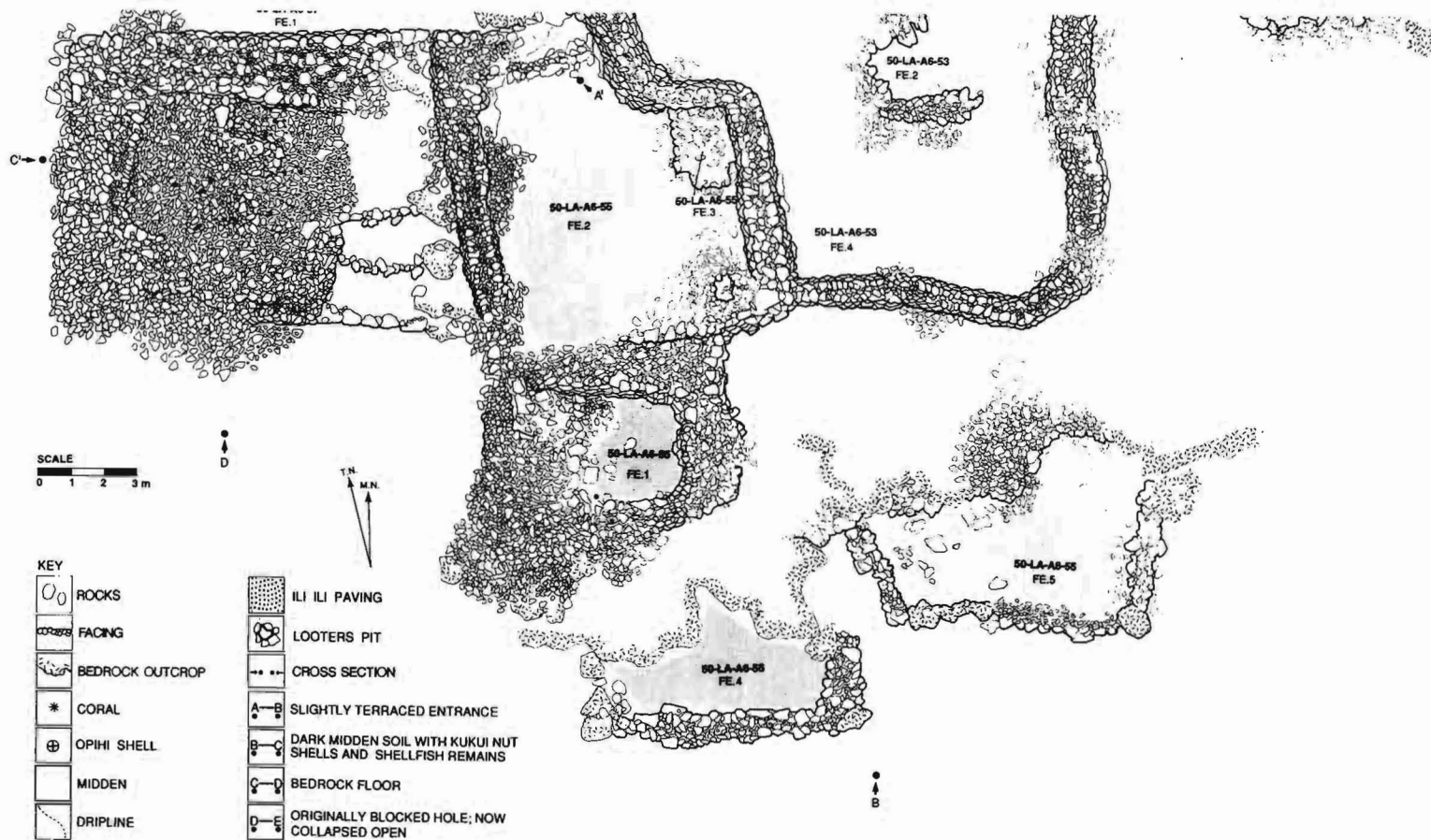


Fig. 5. High-status residential complex/*kauhale* at Sector VIII/1.



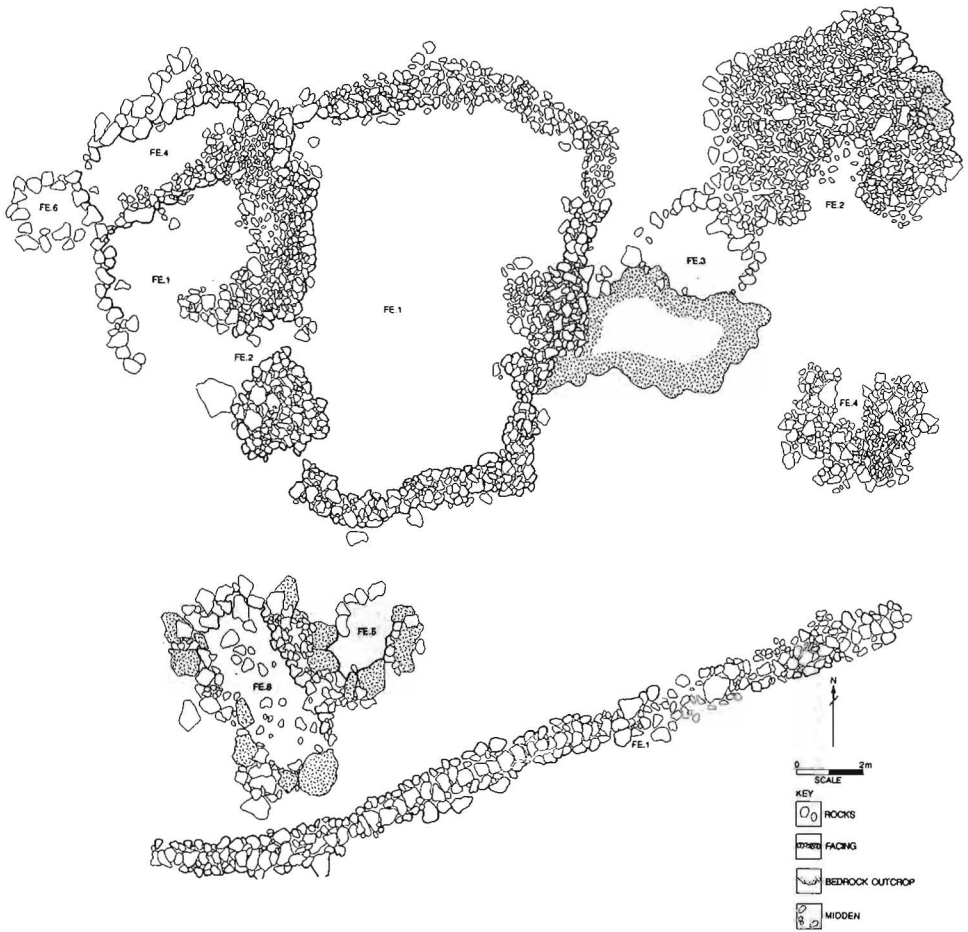


Fig. 6. Low-status residence/*hale noa* with associated features at Sector VII/1 and the Māmaki trail in foreground.

wall 2–4 m tall built onto the slope on the west bank of the Kaunolū Gulch. The terrace itself contained four distinct paved levels (Fig. 10): the exterior lower two levels (Features 1 and 2) were paved with flat cobbles, as was the inner surface (Feature 5), whereas all three floors partially enclosed a slightly sunken level (Feature 6) that was paved with cobbles and water-worn *'ili 'ili*. Two well-constructed holes measuring approximately 50 cm square by 50 cm deep were found in the Feature 2 lower-floor level (Features 3 and 4), perhaps originally supporting wooden statues or posts, although one was interpreted as a firepit by Emory (1924: 62).

The second phase of construction entailed the erection of a wall 2 m tall (Feature 7) around the northwest corner of the preexisting platform, creating a notched C-shaped design enclosing part of the platform on the south side as well. This shape is reminiscent of similar designs on leeward Maui (Kolb 1991, 1992), dated to the latter part of the seventeenth century. The west wall of Feature 7



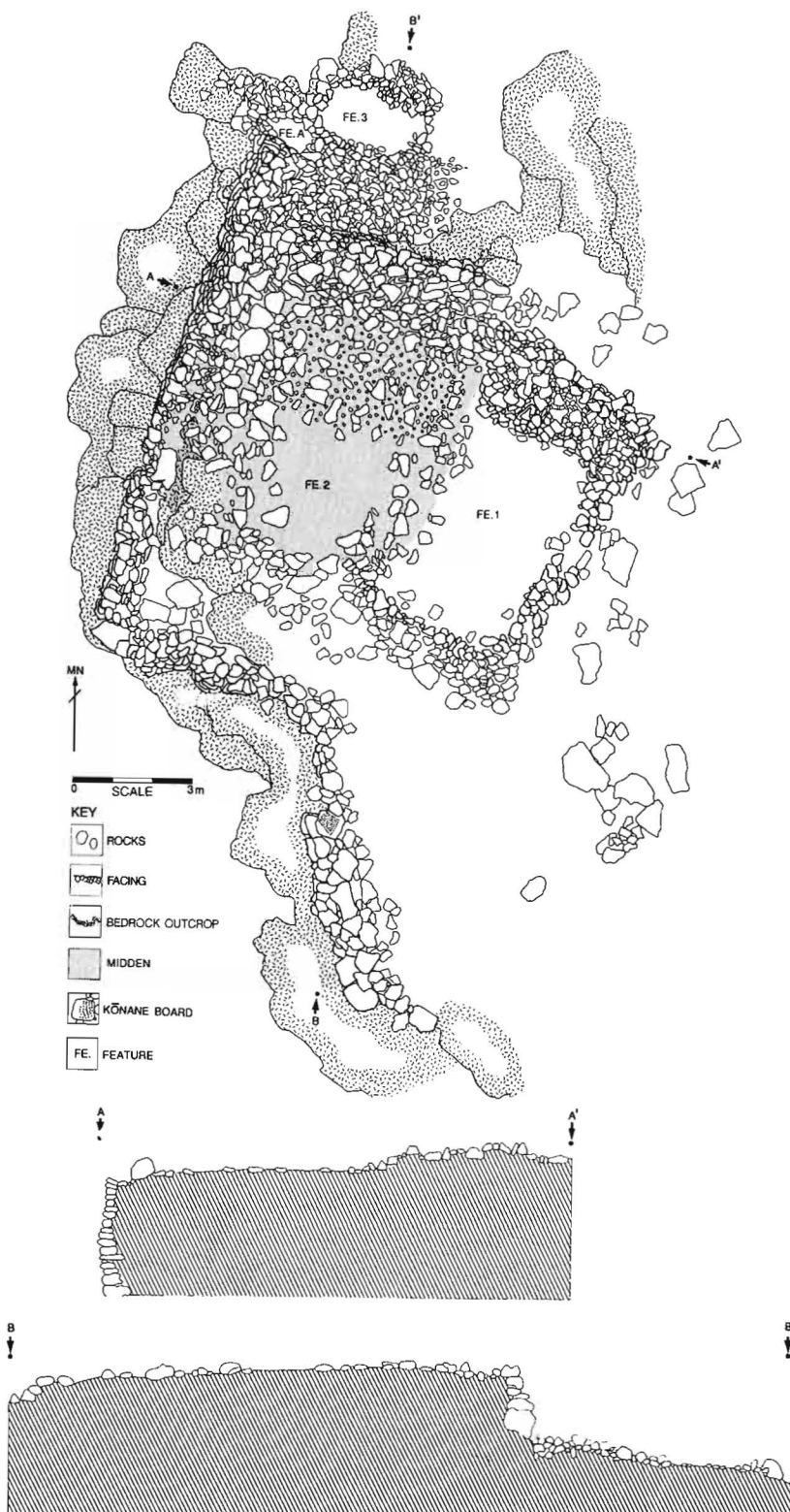
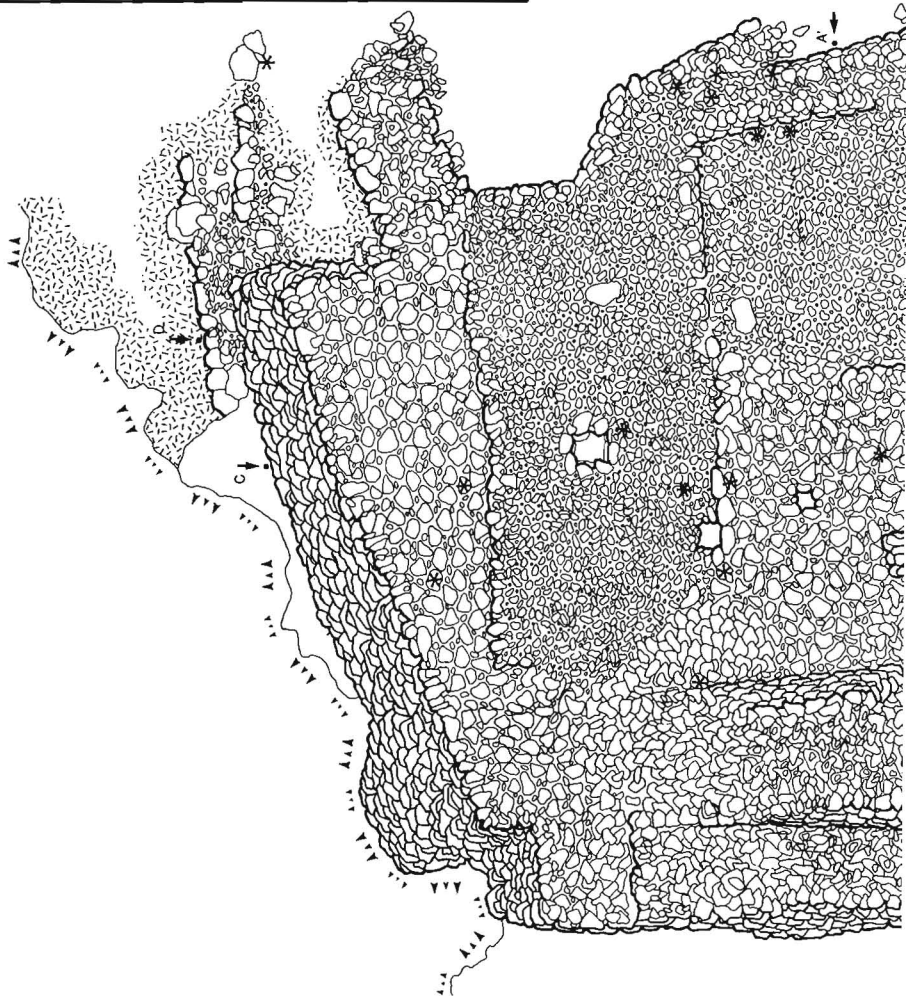
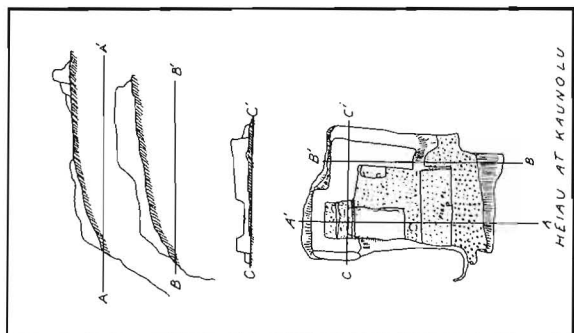


Fig. 7. Kamehameha I's proposed residence at Sector VI/1.



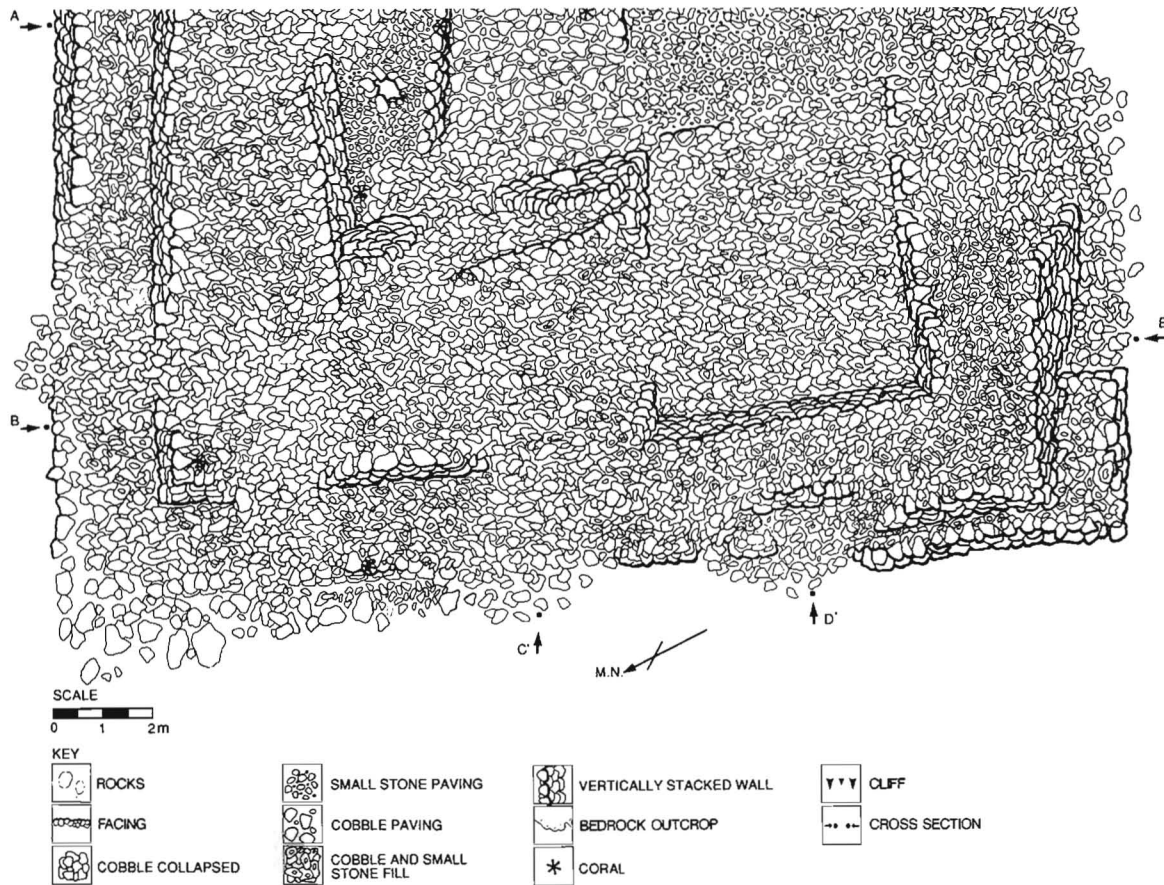


Fig. 8. Halulu Heiau plan view with cross-section locations denoted.

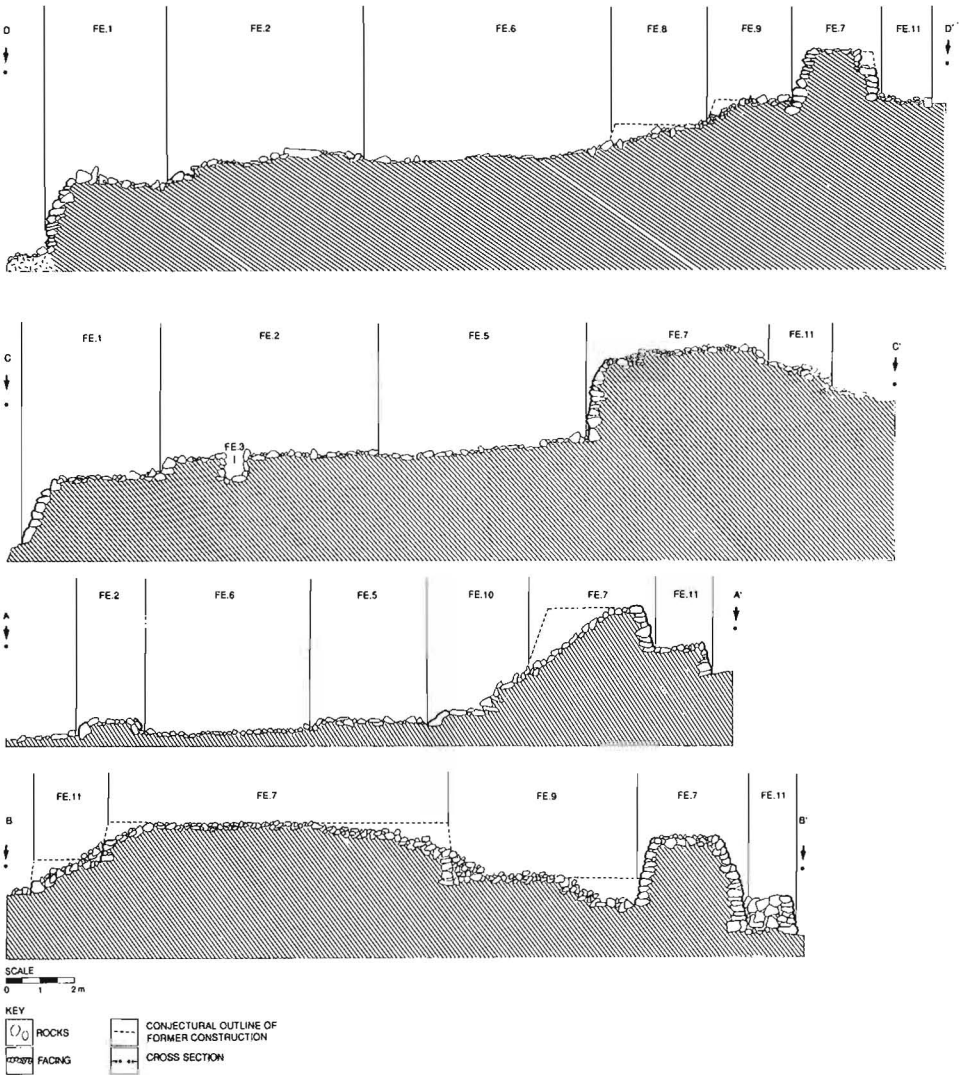


Fig. 9. Halulu Heiau cross-section profiles.

was remodeled at least once after this event, extending an additional 1.5 m to the east, covering over the earlier stacked facade in the northwest corner.

Halulu Heiau, then, appears to have undergone a third phase of monumental-scale construction, with the addition of an apron one m wide by one m tall (Feature 11) around the outside of the C-shaped enclosure, perhaps as a buttress to help maintain the wall fill or to provide a viewing stand for outside observation of religious events. A much smaller platform only 5 by 2 m in size and 50 cm tall was built into the northwest corner (Feature 10), perhaps to serve as an altar, although only one fragment of head coral was visible on the surface. Two terraces were also added within this third phase, another set of terraces (Features 8

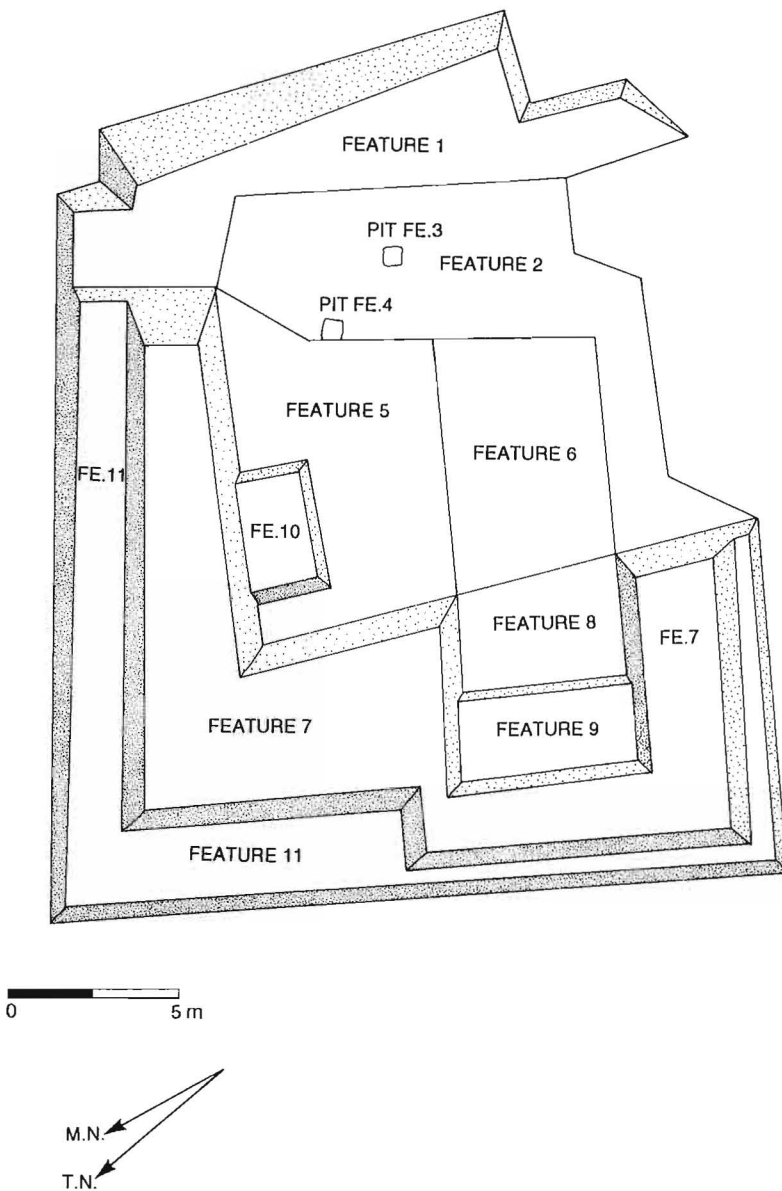


Fig. 10. Schematic plan of Halulu Heiau feature locations.

and 9) forming a second notch in the southwest corner of the heiau. This area may have supported perishable superstructures, although vandalism of this portion of the structure was severe.

It is possible to hypothesize that the phase 1 terrace supporting the 2-m-high walls of this religious structure may have originally been constructed as a *heiau lono* (fertility temple) before the division of the island into *ahupua'a* by Maui chiefs in the late pre-Contact period. The later phases of construction and associ-

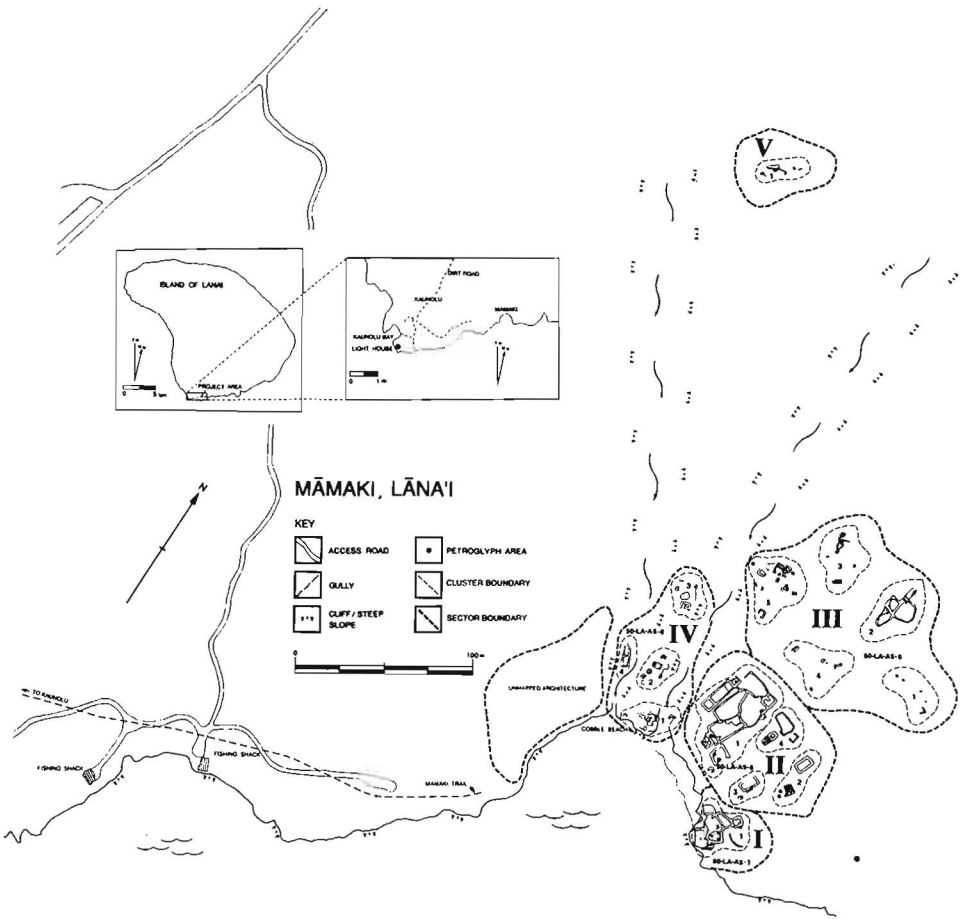


Fig. 11. The settlement of Māmakī: site sectors denoted in Roman numerals; feature complexes denoted in Arabic numerals.

ated residential architecture may then have coincided with the erection of a *heiau luakini* (conquest temple) by a neighbor island *moʻi* of the status of Kahekili, upon conquering or assuming control over his new territory (Valeri 1985:234–235). Whether the structure became a *puʻuhonua* (refuge temple) at this time is unclear historically, although the imposition of new *kapu* associated with off-island elite would probably necessitate some sort of refuge for local residents, especially during times of interisland conflict.

### Māmakī Heiau

The basic notched C-shaped design of Halulu Heiau is also replicated at a *heiau* located at the site of Māmakī (Figs. 11 and 12), a smaller fishing village connected by a paved trail to Kaunolū approximately 1 km east (Fig. 2). Here, a terrace 14 by 20 m in size and 1–2 m tall (Feature 1.5) also underwent two subsequent stages of modification (Fig. 13), as did Halulu Heiau, with the second phase wall (Feature 1.1) resembling the leeward Maui notched style.

A rectangular enclosure located 8 m south of the main structure (Feature 3) also appears to have been built at this time, judging from its similar core-filled construction under 1.5 m tall and its parallel orientation. These two structures and two adjacent pavings (Features 2 and 6) were then enclosed during a third phase by low walls under one m tall (Features 4 and 5), which may have served as animal pens in the post-Contact period. Historic period debris on the surface and several large block names beginning with "K" pecked into wallstones in two complexes from Sector II-1 and -3 may even indicate the actual locale where Ohua, son of the last Kaunolū *konohiki* resided until 1900 (Emory 1924: 51).

The smaller-scale religious structure at Māmaki is oriented westward toward Halulu *Heiau* at Kaunolū, and the two *heiau* may symbolically define the spatial extent of off-island ritual authority within the Keāliakapu *ahupua'a*, considered by some to be the central tribute collection unit on the island (Gay 1965; Kaopuiki and Moore 1987: 14). That the first phase of notched walled construction at this *heiau* is similar to the last phase at Halulu *Heiau* also may indicate the date at which this political event occurred. These facts, plus the presence of an intersite paved trail and several substantial residential complexes similar to those on the east bank in Kaunolū, suggest that Māmaki functioned as part of a larger political and religious system in existence on Lāna'i by the mid-seventeenth century.

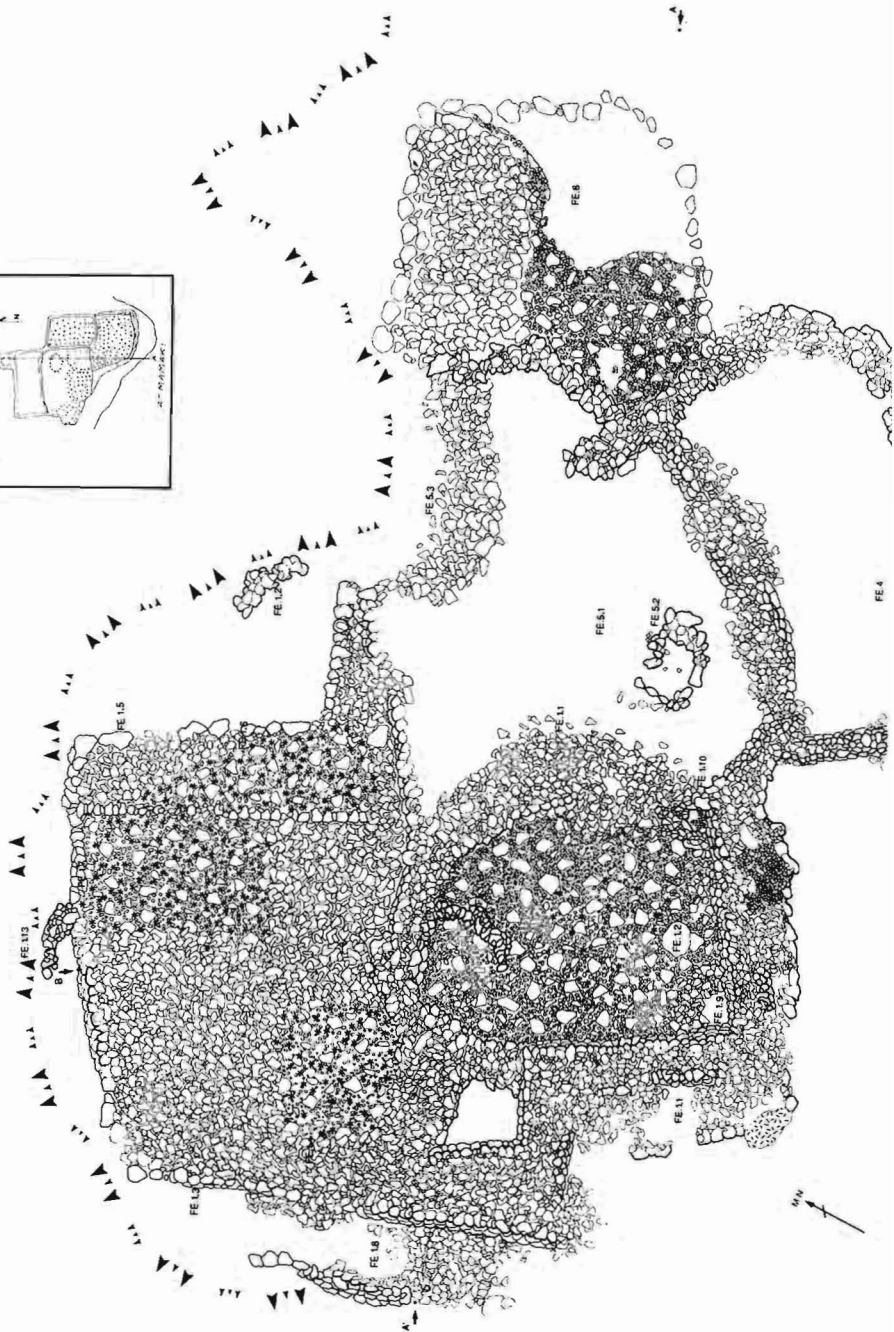
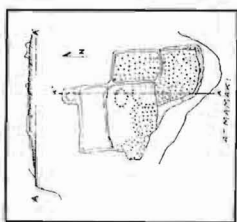
The association of the 18.9 m cliff leap at Kaunolū with Maui war chief Kahekili suggests that this hegemonic interisland relationship probably continued into the late 1700s. It seems likely as well that Halulu *Heiau* would have been rededicated as a *luakini* to the god Kū during Kamehameha I's visits to the village before and after his conquest of the islands in the 1790s (Dunbar 1987: 8). In fact, the naming of the *heiau* after the man-eating Halulu bird may be a symbolic reference to human sacrifices having been performed at this time (Sol Kaho'ohalahala, personal communication 1992).

#### FUTURE DIRECTIONS

A combination of archaeological evidence then suggests that the community at Kaunolū (and presumably the entire island) may have undergone a major change in social organization through time, from a ranked society with a community chief and family heads, to one characterized by greater stratification, with the addition of an island district chief. The political underpinnings of this new position may have rested with the competitive politics of Maui. In order rigorously to test such propositions, additional chronological data are needed from residential structures to determine if the proposed developmental model is correct. Dating successive construction phases in Halulu *Heiau* would be especially helpful in this regard.

If the model is substantially correct, a comparison of excavated remains from the large residences in Sectors VI and VIII inferred to represent *mo'i* and other elite members of the community might then be expected to reveal a higher proportion of non-Lāna'i materials (e.g., Mauna Kea basalt) and high-status markers (e.g., *lei niho palaoa*). A greater percentage of foods given as tribute might also be expected, perhaps indicated by the presence of larger shellfish (such as *opihi*) and pig bone.

On a regional scale, the hypothesized increase in levels of internal sociopoliti-





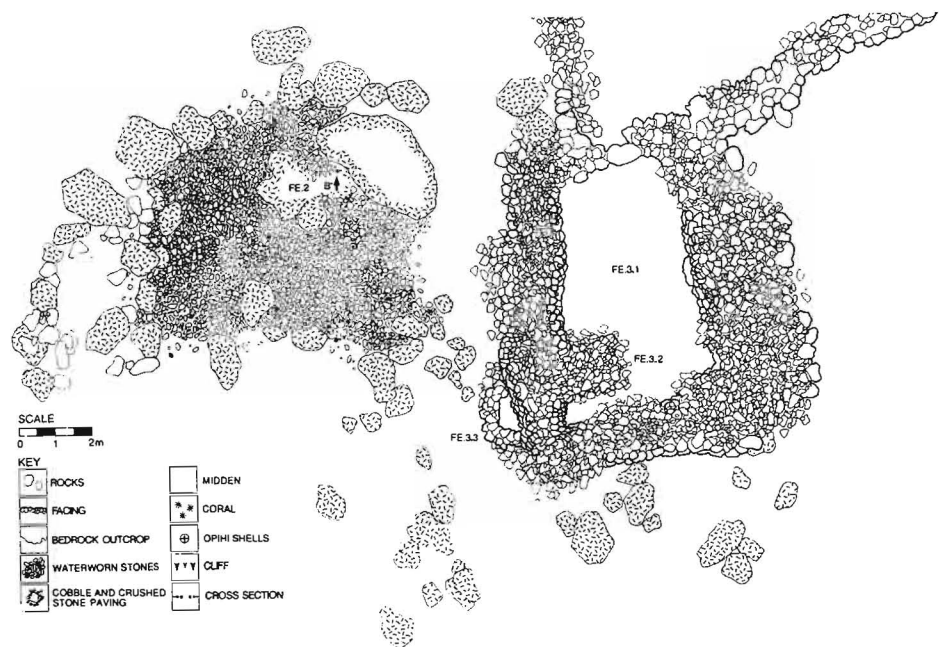


Fig. 12. Māmaki *Heiau* plan view with associated features.

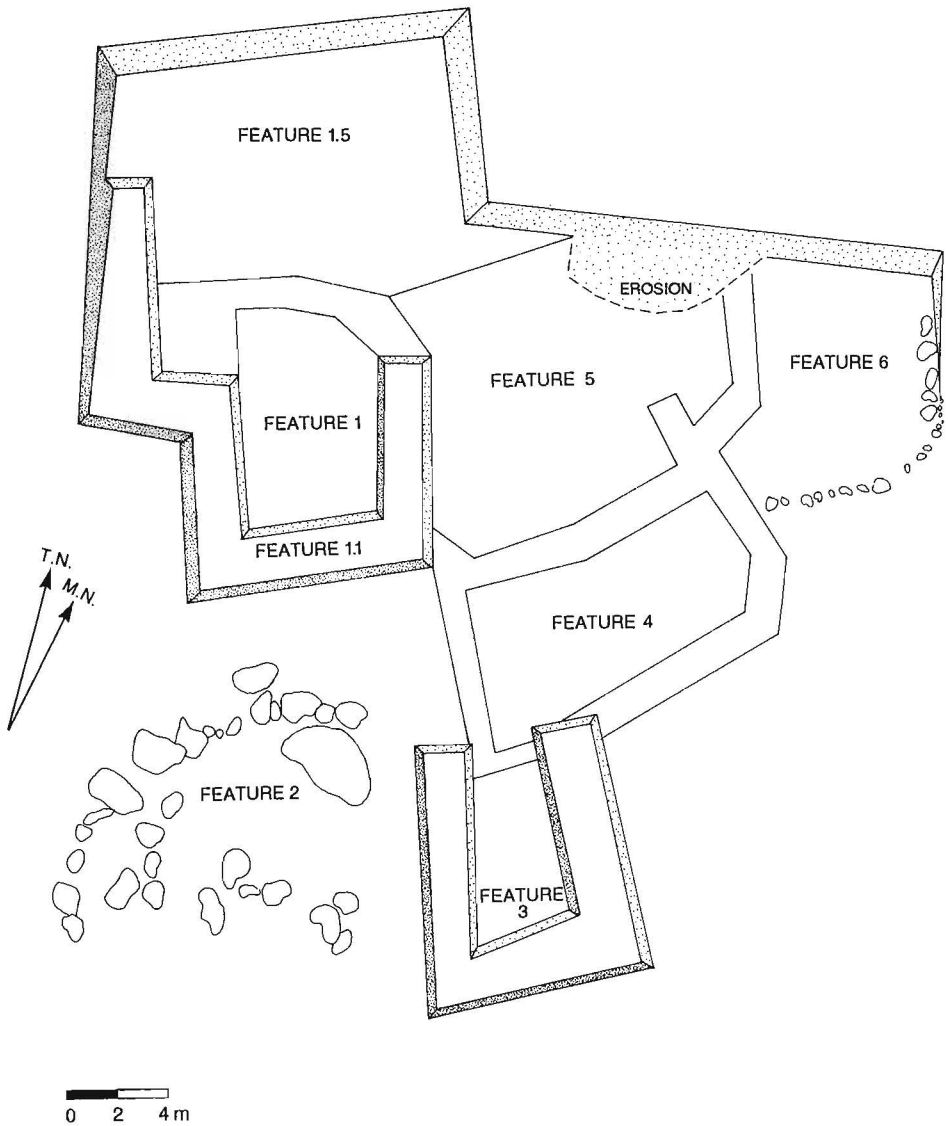


Fig. 13. Schematic plan of Māmaki *Heiau* feature locations.

cal complexity might be reflected in a parallel change in island-wide settlement patterns (Spencer 1987), yielding a more pyramidal hierarchy of communities. This would be in keeping with the hegemonic model. If such was the case, then Kaunolū would have occupied the apex of this pyramid, functioning as the economic and political representation of Maui, and later Hawai‘i, island elite authority on Lāna‘i. Smaller communities such as those at Māmaki and at other locations where larger *heiau* occurred would then represent an intermediate tier of the regional hierarchy, being the locations where *konohiki* resided. They, in turn, were responsible for collecting tribute from individual households or social groups in their respective *ahupua‘a* across the more productive uplands.

A comparison of excavated material among residential structures of various sizes at the sites of Mānele Bay, Hulopo'e, Kapiha'a, Māmaki, and Kaunolū would be one way to assess the validity of this regional model, preferably from contemporaneous deposits. A surface comparison of architectural details (i.e., size, height, degree of stacking, presence of 'ili 'ili paving, etc.) from residential platforms between these and other sites might also prove productive, in order to investigate hierarchical relationships on Lāna'i. A similar study of *heiau* characteristics (i.e., the presence of a platform, use of building materials, complexity of design, etc.) on Lāna'i would provide an independent measure of these proposed linkages.

### CONCLUSION

The presence of political hegemony at the site of Kaunolū has been interpreted from various lines of evidence, from spatial relationships among sectors to architectural elements within complexes. The isolation from the rest of the site of Kamehameha I's proposed residence in Sector VI suggests a level of *ali'i* status not historically associated with Lāna'i prior to the incorporation of the island into the Maui sphere of influence. The later phases of walled construction at Kaunolū and Māmaki *heiau*, similar in form to those of leeward Maui, might indicate the deliberate exclusion of Lāna'i residents from Maui elite ritual. The proposed shift in household patterns from U-shaped complexes on the west bank to more spatially discrete components on the east bank may reflect a response to a more rigidly defined *kapu* system introduced with an additional level in the class structure on Lāna'i. The presence of fewer interconnected components in better-preserved *kauhale* (traditional household unit) of Site Sectors VIII and X might then reflect the post-Contact breakdown of this system (Ladefoged 1991; Sweeney 1992), in this case associated with Euroamerican sociopolitical intrusions.

This pattern of response to hegemonic expansion and the eventual subjugation of Lāna'i is not necessarily the only model possible for areas on neighboring islands that periodically fell under one of the Maui polities. Recent archaeological research on southwest Moloka'i (Dixon and Major 1992), western O'ahu (Flood et al. 1993), and east Maui (Gosser et al. 1992; Klieger 1992; Stocker and Klieger 1992) failed to find evidence of a three-tiered settlement hierarchy for the late prehistoric period. However, by the late 1700s, "With Kahekili's ambitious scheme, the islands were well on their way to state-level political complexity, preceded by endogamous class formation, hierarchical elaboration, restrictive distribution, and well-organized taxation through the commandeering of produce and corvee labor" (Klieger 1992: 16).

### ACKNOWLEDGMENTS

The five months of research on Lāna'i were made possible by the Lāna'i Institute for Business and Culture, whose generosity is greatly appreciated. In particular, the foresight of David Murdock and the cooperation of Tom Leppart of Castle and Cooke, Ltd., made this project a reality.

On the island of Lāna'i, Sol Kaho'ohalahala was indispensable in coordinating our needs with the Lāna'i Company, and his vision for the future of Kaunolū was inspirational. Local residents Roxanne Morita and Wendell Kaho'ohalahala participated in the mapping and recording of architectural remains at Kaunolū. Sol Kao-puiki shared his considerable knowledge of the site and the *'aina*.

The authors would like to thank Bishop Museum staff Hemantha Jayatilleke, Brad Evans, and Lora Crall, who were responsible for the final illustrations. Priscilla Billig, Grace Valiente-Sacramento, and Lana Pigao helped produce drafts of the manuscript. Angela Steiner-Horton trained local residents in proper laboratory procedures, while Toni Han and Muffet Rogers-Jourdane provided assistance with archival research. Discussions with Suzy Allen, and SHPD archaeologists Ross Cordy, Annie Griffin, and Mike Kolb focused our attention on many issues of importance.

Thanks are also given to Michael Graves for his continued confidence and editorial patience with our research and to the anonymous reviewers for their insightful critiques.

#### REFERENCES

- ABRAMS, E.  
1987 Economic specialization and construction personnel in Classic Period Copan, Honduras. *American Antiquity* 52: 485-499.
- ATHENS, S.  
1992 Ethnicity and adaptation: The Late Period-Cara occupation in Northern Highland Ecuador, in *Resources, Power, and Interregional Interaction*: 193-220, ed. E. Schortman and P. Urban. New York: Plenum Press.
- ATHENS, S., AND M. KASCHKO  
1988 Lanai prehistory: A preliminary report on settlement and chronology at the Manele Bay and Hulopoe Bay areas. Paper presented at the Society for Hawaiian Archaeology Conference on Hawaiian Archaeology, Volcano National Park, Hawaii, March 19 and 20.
- BLANTON, R., AND G. FEINMAN  
1983 The Mesoamerican world system. *American Anthropologist* 86: 673-682.
- CHEEK, C.  
1986 Construction activity as a measurement of change at Copan, Honduras, in *The Southeast Maya Periphery*: 50-71, ed. P. Urban and E. Schortman. Austin: University of Texas Press.
- DIXON, B.  
1991 Preliminary cultural resource interpretive plan for Kaunolū, Lāna'i. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.  
1992 A revised cultural resource interpretive plan for the proposed archaeological park at Kaunolū, Island of Lāna'i, Hawai'i. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.
- DIXON, B., AND M. MAJOR  
1992 Kapukahehu to Pu'uhakina: An archaeological inventory survey of southwest Moloka'i, Hawai'i. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.
- DIXON, B., M. MAJOR, AND D. LAZZARO  
1992 Kaunolū: An archaeological inventory survey and mapping of State Site 50-40-98-25, Kaunolū and Kealiakapu *Ahupua'a*, Lāna'i, Hawai'i. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.
- DRENNAN, R., AND C. URIBE  
1987 *Chiefdoms in the Americas*. Lanham, MD: University Press of America.
- DUNBAR, H.  
1987 Kaunolū Village national historic landmark. National Register of Historic Places Inventory, Nomination Form. Honolulu: State Historic Preservation Department.
- DYSON, S.  
1985 *The Creation of the Roman Frontier*. Princeton, NJ: Princeton University Press.
- EISENSTADT, S.  
1963 *The Political Systems of Empires*. London: Free Press of Glencoe.
- EMORY, K.  
1921 Unpublished personal diary. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.

- 1924 *The Island of Lanai*. B. P. Bishop Museum Bulletin 12.
- FIRTH, R.  
 1936 *We, the Tikopia*. Boston: Beacon Press.  
 1965 *Primitive Polynesian Economy*. New York: W. W. Norton and Co.
- FLOOD, K., P. KIEGER, AND B. DIXON  
 1993 An archaeological inventory survey of State Site 50-80-07-2472, Wai'anae *Ahupua'a*, Wai'anae District, O'ahu Island, Hawai'i. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.
- FORNANDER COLLECTION  
 1916- Memoirs of the Bernice Pauahi Bishop Museum 5, 2nd series. Honolulu: Bishop  
 1918 Museum.
- GAY, L.  
 1965 *True Stories of the Island of Lanai*. Honolulu: Rogers Printing.
- GOSSE, D., S. CLARK, AND B. DIXON  
 1992 *Na Lawai'a O 'Ao'ao Kona O Ka Moku*: Excavations at the Southern Acreage and Lot 15, Wailea, Maui. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.
- HAMMATT, H., D. BORTHWICK, W. FOLK, AND M. STRIDE  
 1990 Archaeological inventory survey of the 300-acre rural district Palawai, Lāna'i. Cultural Surveys Hawaii, Honolulu.
- HANDY, C., AND E. HANDY  
 1972 *Native Planters in Old Hawaii*. B. P. Bishop Museum Bulletin 233.
- HASSIG, R.  
 1993 *War and Society in Ancient Mesoamerica*. Berkeley and Los Angeles: University of California Press.
- HEDEAGER, L.  
 1987 Empire, frontier, and the barbarian hinterland: Rome and Northern Europe from A.D. 1 to 400, in *Centre and Periphery in the Ancient World*: 125-140, ed. M. Rowlands, M. Larsen, and K. Kristiansen. Cambridge: Cambridge University Press.
- HOUSTON, S.  
 1993 *Hieroglyphs and History at Dos Pilas*. Austin: University of Texas Press.
- KAMAKAU, S.  
 1992 *Ruling Chiefs of Hawaii*. Honolulu: Kamehameha Schools Press.
- KAME'ĒLEIHIWA, L.  
 1992 *Native Land and Foreign Desires*. Honolulu: Bishop Museum Press.
- KAOPUIKI, E., AND R. MOORE  
 1987 *Lanai: The Mystery Island*. Honolulu: Lopa Publishing Co.
- KASCHKO, M., AND S. ATHENS  
 1987 Archaeological inventory survey of the Hulopoe Bay and Manele Bay areas, Island of Lanai, Hawaii. Report prepared for M & E Pacific, Inc. Honolulu: International Archaeological Research Institute.
- KIRCH, P.  
 1985 *Feathered Gods and Fishhooks*. Honolulu: University of Hawai'i Press.
- KLIEGER, P.  
 1992 Archaeological data recovery report for Parcel SF7, Wailea, Paeehu *Ahupua'a*, Makawao District, Island of Maui, Hawai'i. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.
- KOHL, P.  
 1992 The Transcaucasian "periphery" in the Bronze Age: A preliminary formulation, in *Resources, Power, and Interregional Interaction*: 117-138, ed. E. Schortman and P. Urban. New York: Plenum Press.
- KOLB, M.  
 1991 "Social Power, Chiefly Authority, and Ceremonial Architecture, in an Island Polity, Maui, Hawaii." Ph.D. diss., University of California, Los Angeles.

- 1992 Diachronic design changes in *heiau* temple architecture on the island of Maui, Hawai'i. *Asian Perspectives* 31(1): 9-37.
- LADEFOGED, T.  
1991 Hawaiian architectural transformations during the Early Historic Era. *Asian Perspectives* 30(1): 56-69.
- LADEFOGED, T., G. F. SOMERS, AND M. M. LANE-HAMASAKI  
1987 *A Settlement Pattern Analysis of a Portion of Hawaii Volcanoes National Park*. Western Archeological and Conservation Center Publication in Anthropology, 44. Tucson, Arizona.
- LUTTWACK, E.  
1976 *The Grand Strategy of the Roman Empire*. Baltimore: Johns Hopkins University Press.
- RENFREW, C., AND J. CHERRY  
1986 *Peer Polity Interaction and Socio-political Change*. Cambridge: Cambridge University Press.
- SAHLINS, M.  
1958 *Social Stratification in Polynesia*. Seattle: American Ethnological Society.  
1963 Poor man, rich man, big-man, chief: Political types in Melanesia and Polynesia. *Comparative Studies in Society and History* 5: 285-303.  
1992 *Anahulu, The Anthropology of History in the Kingdom of Hawaii*, Volume 1: *Historical Ethnography*. Chicago: University of Chicago Press.
- SANTLEY, R., AND R. ALEXANDER  
1992 The political economy of core-periphery systems, in *Resources, Power, and Interregional Interaction*: 23-50, ed. E. Schortman and P. Urban. New York: Plenum Press.
- SCHORTMAN, E., AND P. URBAN  
1987 Modeling interregional interaction in prehistory, in *Advances in Archaeological Method and Theory*, Vol. 11: 37-95, ed. M. Schiffer. Orlando, FL: Academic Press.
- SCHORTMAN, E., AND P. URBAN, EDS.  
1992 *Resources, Power, and Interregional Interaction*. New York: Plenum Press.
- SMITH, C.  
1976 Exchange systems and the spatial distribution of elites: The organization of stratification in agrarian societies, in *Regional Analysis*, Vol. 2: *Social Systems*: 390-474, ed. C. Smith. New York: Academic Press.
- SPENCER, C.  
1987 Rethinking the chiefdom, in *Chiefdoms in the Americas*: 369-390, ed. R. Drennan and C. Uribe. Lanham, MO: University Press of America.
- STOCKER, T., AND P. KIEGER  
1992 Archaeological inventory survey of a portion of Parcel MF-12 (TMK 2-1-8: Parcel 42), Wailea, Maui Island, State of Hawaii. Manuscript on file, Department of Anthropology, Bishop Museum, Honolulu.
- SWEENEY, M.  
1992 Settlement pattern change in Hawai'i: Testing a model for the cultural response to population collapse. *Asian Perspectives* 31(1): 39-56.
- VALERI, V.  
1985 *Kingship and Sacrifice*. Chicago: University of Chicago Press.
- WEISLER, M., AND P. KIRCH  
1985 The structure of settlement space in a Polynesian chiefdom: Kawela, Molokai, Hawaiian Islands. *New Zealand Journal of Archaeology* 7: 129-158.
- WELLS, P.  
1992 Tradition, identity, and change beyond the Roman frontier, in *Resources, Power, and Interregional Interaction*: 175-192, ed. E. Schortman and P. Urban. New York: Plenum Press.
- ZIMANSKY, P.  
1985 *Ecology and Empire: The Structure of the Urartian State*. Studies in Ancient Oriental Civilization No. 41. Chicago: Oriental Institute of the University of Chicago Press.

## ABSTRACT

Early accounts of Hawaiian history indicate that the island of Lānaʻi first came under the political rule of Maui chiefs during the fifteenth century A.D. Results of a 1991 intensive survey and mapping of the archaeological sites of Kaunolū and Māmaki on the southwest coast of the island, however, did not detect surface evidence of this relationship prior to the mid-1600s, with substantial habitation at the villages presumably occurring in the succeeding two centuries. An interpretation of monumental-scale *heiau* (religious structure) construction style at both sites, and a study of possible community growth at Kaunolū, do suggest that off-island political hegemony may be detected in the architectural record. But, several additional avenues for future research are proposed to refine the chronology and nature of this hypothetical political relationship. KEYWORDS: chiefdoms, *heiau*, Hawaiʻi, Lānaʻi, architectural style, community growth.